



February 8, 2018

The Honorable Lamar Smith  
Chair  
House Committee on Science, Space and  
Technology  
2321 Rayburn House Office Building  
Washington, DC 20515

The Honorable Eddie Bernice Johnson  
Ranking Member  
House Committee on Science, Space and  
Technology  
2321 Rayburn House Office Building  
Washington, DC 20515

*Re: HR 4675 – Low Dose Radiation Research*

Dear Chairman Smith and Ranking Member Johnson:

The undersigned organizations and individuals respectfully request that the above legislation be withdrawn from consideration. As explained below, this proposal is ill-conceived and has serious adverse ramifications. The scope of the impact is quite broad and could affect Department of Energy (DOE) worker protections, consumer protections from recycled radioactive materials, remediation of Department of Energy (DOE) Super Fund sites, and future claimants under the Energy Employees Occupational Illness Compensation Program. Additionally, the results of this research will have consequences far beyond the DOE responsibilities including populations located near nuclear power plants and the standards issued by the Environmental Protection Agency protect the public at large from radioactive contamination to the water and soil.

The most glaring problem is that this legislation would fund the U.S. Department of Energy (DOE) for this research, Sec. 977A(a) “The Secretary shall carry out a basic research program on low-dose radiation.”

### **Putting the Fox in Charge of the Hen House**

As reported in the National Academies of Sciences (NAS), *REVIEW OF THE WORKER AND PUBLIC HEALTH ACTIVITIES PROGRAM ADMINISTERED BY THE DEPARTMENT OF ENERGY AND THE DEPARTMENT OF HEALTH AND HUMAN SERVICES*, <https://goo.gl/XZ6SRq>, published more than a decade ago,

*DOE was criticized for a perceived inherent conflict of interest in the department's role in conducting such studies, particularly those studies designed to evaluate the health effects of exposure to low-dose radiation; the credibility of the program was an issue because a majority of the mortality studies were carried out by DOE contractors closely associated with the production efforts. A general distrust of the results of the studies also developed in part from the fact that the data were considered proprietary by DOE and were not made publicly available (NRC 1990). In response to these criticisms, in 1989 DOE Secretary James M. Watkins established an advisory committee, the Secretarial Panel for Evaluation of Epidemiologic Research Activities (SPEERA), to conduct an evaluation of the program.*

*Reviews of the program by SPEERA (SPEERA 1990) and National Research Council (NRC) committees (NRC 1990, 1994) were ultimately responsible for the restructuring of the program. In its evaluation in 1990, SPEERA recommended, and Congress subsequently requested, that analytic epidemiological research efforts be transferred to HHS because of concerns regarding the independence and objectivity of the DOE program.*

A February 28, 1990 article in the New York Times reported testimony provided by Dr. Gregg S. Wilkinson, former epidemiology group leader at Los Alamos National Lab from 1980 to 1987 <https://goo.gl/XZ6SRq>. Dr. Wilkinson “described how he was berated by a top laboratory official after finishing a study that found an unexpectedly high cancer rate at the Rocky Flats plutonium processing plant outside Denver. The article includes this quote from Dr. Wilkinson obtained in a telephone interview, “It meant that I should be writing in a way that makes the Energy Department happy. I knew then I had to leave.”

DOE currently awards funding to researchers to study biological effects of low level radiation dose. However, this is not the same as DOE carrying out the research program.

<https://science.energy.gov/ber/research/bssd/low-dose-radiation/>

*The Low Dose Program is unique within the U.S. government in supporting experimental radiation biology research that studies the effects of very low dose exposures. Since its beginning in 1999, the focus of research has been to study cellular and molecular responses to doses of X- or gamma- radiation that are at or near current workplace exposure limits; in general, for total radiation doses that are less than 100 millisievert (10 rem). Currently about 40% of Program funds support research projects at academic institutions and the remaining 60% support program-project research at three DOE National Laboratories, LBNL, ORNL, and PNNL. An Investigators' Workshop is held yearly, and focused topical workshops are held as needed.*

### **Legislation Opens the Door for Future Experimentation on Human Subjects**

Currently, the DOE “...adheres to the ethical principles of the Nuremberg Code and the Belmont Report...” when it comes to using human subjects for experiments, (see <https://science.energy.gov/ber/human-subjects/>)

This was not always the case. DOE has a dark past of exposing the uninformed to radiation.

It's important to remember the history of the experiments performed on disadvantaged populations, <https://www.atomicheritage.org/history/human-radiation-experiments>  
<http://large.stanford.edu/courses/2013/ph241/yeo2/>

H.R. 4675 strips away the protections provided by the Energy Policy Act of 2005. Paragraph (f) of the proposed legislation states, <https://www.congress.gov/bill/115th-congress/house-bill/4675/text> states,

*(f) RULE OF CONSTRUCTION. Nothing in this section shall be construed to subject any research carried out by the Secretary for the program under this section to any limitations described in 977(e) of the Energy Policy Act of 2005 (42 U.S.C. 16317(e)).*

977(e) of the Energy Policy Act of 2005 states,

*(e) Prohibition on biomedical and human cell and human subject research*

*(1) No biomedical research*

*In carrying out the program under this section, the Secretary shall not conduct biomedical research.*

*(2) Limitations*

*Nothing in this section shall authorize the Secretary to conduct any research or demonstrations-*

*(A) on human cells or human subjects; or*

*(B) designed to have direct application with respect to human cells or human subjects.*

To simplify the language, Paragraph (f) of H.R. 4675 can translate to be,

*Nothing in this section means that any research will be limited to the restrictions of the Energy Policy Act of 2005 which prohibits any research or demonstrations on human cells or human subjects or are designed to have direct application with respect to human cells or human subjects.*

Funding that establishes inherent conflicts of interest at an agency with demonstrated serious ethical lapses should never be permitted to oversee human research.

### **Other Groups Potentially Impacted**

With DOE's past experience of not providing relevant data to scientist conducting mortality studies and its inherent conflict, as mentioned above, it would not be surprising to imagine that DOE could revert to its old habits if this legislation is passed.

Envision that this DOE research program determines, through skewed or incomplete data, that exposure to less than 100 millisieverts will not result in any adverse health effects. This could have serious consequences for populations other than potential human experimental subjects. A few short examples follow.

Superfund Sites - DOE is responsible for the decontamination and decommissioning of sites which left radioactive contamination on the properties. If erroneous conclusions are made about the health effects of low-dose radiation, materials could be left onsite or simply disposed of at a local landfill. Surrounding communities will be affected.

DOE Workers – If through faulty research, the conclusion is made that these workers will not develop diseases from low level radiation. Protection standards will then be lowered. Workers will not be monitored for exposure because it will be assumed that they will not be exposed to high level radiation except in certain circumstances.

Future EEOICP Claimants – If worker protections are reduced because inaccurate research declares that there are not adverse health effects from low level radiation and the result of lack of monitoring, claimants under this compensation program will have an impossible task in proving their claim.

Consumers – In recent years, DOE has attempted to introduce recycled radioactive materials into consumer products. To our knowledge, this plan never implemented. But if conclusions are drawn using skewed data that low-level radiation exposure causes not harm, then this idea could re-emerge.

Nuclear Power – Current public protections are based on the assumption that exposure to ionizing radiation should be minimized. If low dose ionizing radiation's actual risks are underestimated, the consequences for children and adults, and especially embryos and fetuses, would be harmful.

We are not asserting that these scenarios will happen. But they could happen because many have happened.

## **Conclusion**

The bill as written is fatally flawed and should be withdrawn. Any subsequent bill on this topic should be developed in collaboration with bioethicists and with specialists familiar with the history of DOE research and the reasons that Congress put constraints on their research in the recent past.

If Congress does not learn from the past, they will make mistakes that are avoidable and can be harmful to the US public.

Thank you for your consideration.

Sincerely,



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